

Academic Motivation and Use of Learning Management Systems by Undergraduates in the University of Ibadan

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Abstract

This study investigated academic motivation and the use of learning management system (LMS) among undergraduates in the University of Ibadan. The study adopted a descriptive survey research design. The multistage sampling technique was used to select a sample of 132 respondents from the 16 faculties in the University of Ibadan. The questionnaire was data collection instrument. Frequency counts, percentages, mean and standard deviation were used to analyse descriptive data while Pearson correlation was used to analyse inferential data. Findings revealed that there was a high level of academic motivation among undergraduates at the University of Ibadan ($x = 3.0 > 2.50$), the predominant types of LMS used by undergraduates in the University of Ibadan include: University of Ibadan LMS, Google Classroom, Moodle, MOOC Platforms (e.g. Coursera, Udemy, Udacity etc.) and Schoology. The main purpose of the use of LMS by students include accessing course materials ($x = 2.95$), submitting assignments ($x = 2.84$), participating in online discussions ($x = 2.83$) and for personalised learning ($x = 2.80$). However, the students were not well exposed to the use of LMS ($x = 1.96 < 2.50$). The challenges to the use of LMS by students include slow

performance of the LMS (2.83), insufficient resources and materials for learning on the LMS ($x = 2.70$) and difficulty in accessing LMS from multiple devices ($x = 2.63$), among others. A positive and significant linear relationship between academic motivation and the use of LMS by undergraduates at the University of Ibadan ($r = .210$; $P < 0.05$) was established. The study concluded that academic motivation significantly influences undergraduates' engagement with LMS platforms. It was recommended that the university should design and implement training programmes and workshops for both students and instructors on how to effectively use the LMS.

Keywords: Academic motivation, Learning Management Systems, Undergraduates.

Introduction

Learning management systems are web-based software platforms that provide an interactive online learning environment and automate the administration, organisation, delivery and reporting of educational content and learner outcomes. According to Almoslamani (2018) and Turnbull et al. (2022), LMS is a complex, web-based application that provides tools and functions such as content delivery, learning assessment, communications services and course management. It supports learners for online or blended learning activities. Snopce and Fetaji (2019) define LMS as an e-learning system that incorporates a high level of strategic planning to manage educational activities within an academic institution, so it can provide online learning in a virtual classroom, allowing the institution to manage learners, learning activities, as well as other necessary administrative functions.

Learning Management Systems (LMSs) assist in traditional classrooms, distance learning, or any combination of the two. LMSs deliver and manage instructional content and typically handle student registration, online course administration and tracking and assessment of student work. LMS provides interactive features such as threaded discussions, video conferencing and discussion forums, etc. Some of the LMS used for creating and managing e-learning-based courses are Moodle, TelEduc, BlackBoard, WebCT, Toolbook, TopClass Server, web-based homework, among others (Lopes, 2014). Wright, Lopes, Montgomerie, Reju and Schmoller (2014) noted that LMSs are known by various names, some of which include: Course Management System (CMS), Learning Content Management System (LCMS), Virtual Learning Environment (VLE) and Virtual Learning System (VLS).

The adoption of LMS is a notable phenomenon in higher education. According to an Educause Centre for Analysis and Research (ECAR) survey, 85% of faculty use an LMS, with 56% use it on a daily basis and 83% of students use an LMS, with 56% using it in most or all

courses (Berking and Gallagher, 2016). However, despite the successful adoption and use of an LMS in higher education, users such as academic leaders, faculty and students urge LMS vendors to improve LMS features and functions (Brown, Dehoney and Millichap, 2015). Nonetheless, Ayub et al. (2010) affirmed that students' utilisation of LMS is still minimal. As a result, the authors recommended that universities should identify the factors that influence the students' usage of an online learning environment and magnify these factors so that more usage will be achieved.

Leidner and Jarvenpaa (1995) identified three main variables that influence the effective usage of an e-learning environment by students. These are technology, teaching and student characteristics. This is similar with the view of Shawar and Al-Sadi (2010) that the factors influencing the usage of e-learning include but not limited to human factors (motivation, skills, time and effort); instructor and student technical competency; constructivist thinking by the instructors and students; high level collaboration and user-friendliness of the system. However, in the course of this study, motivation only will be considered as a factor influencing the usage of LMS by students. This is because the study restricts itself to academic motivation and the use of LMS by undergraduate students.

Motivation is the willingness to act, especially in behaviour. As an innate phenomenon, motivation exists as a result of influence from external/internal stimuli, environmental factors, goals and internal conditions (Amrai, Elahi, Azizi and Parhon, 2011). It defines the underlying reasons for human behaviour, governing why people behave the way they do. According to Amrai et al. (2011), in the field of education, motivation is often described as being a tridimensional phenomenon comprising an individual's reasons and goals, emotional responses and beliefs in ability and competence to successfully complete a specific task.

Universities, as learning citadels, represent the highest institution for knowledge acquisition, set up mainly for three related purposes, namely: teaching, learning and research. These related purposes can, however, be effectively and efficiently actualised through effective and efficient Learning Management Systems. The confirmation of this is the University of Ibadan, which is already benefiting from the LMS by providing its students with electronic educational resources. By registering a personal account, students acquired the opportunity to sign up for a specific online course, gain access to electronic lectures, practical materials, online and offline consultations, as well as obtain additional points for passing tests and completing tasks and research projects. Thus,

with LMS as a potential medium for effective learning and instructional delivery process, the perception and attitudes of undergraduates in terms of application and utilisation of the platform need to be examined. Hence, the preoccupation of this study to examine students' academic motivation and use of the Learning Management System among undergraduates in the University of Ibadan.

Statement of the problem

Information and Communication Technology (ICT) has become a major focus of interest in the educational field. The integration of ICT in education has brought about immense benefit to the educational system, from amongst which include: increasing the quality of learning, providing students with technological skills, encouraging students to be more interactive, promoting teachers and students' performance and motivation, as well as removing the limitations of time and space in instructional processes. Traditional learning requires students to engage in different activities in the university environment. For example, lectures as well as discussions between students require students to interact and collaborate within the classroom. Whereas, the online learning environment has many tools such as voice chat, video conferencing, amongst others, in which students can engage and interact amongst themselves without necessarily being physically available in the classroom. Learning Management Systems (LMS) provide both faculty and students with an online classroom that reinforces learning processes. It provides interactive features such as threaded discussions, video conferencing, discussion forums, etc, which facilitates teaching and learning processes.

It has however been observed that the utilisation of LMS is still minimal among university students. Human factors such as motivation, as well as other factors such as instructor and student technical competency and user-friendliness of the system, are among the factors considered to be influencing the use of LMS by university students. Motivation is one of the most important sources of power that determines the direction, intensity and determination of student behaviour in the learning-teaching process. It is one of the most important psychological concepts in education that encourages students to learn. Motivation, however, has been observed to play a significant role in the adoption of online learning systems by university students. It is on this premise that this study seeks to examine academic motivation and the use of the Learning Management System among undergraduates in the University of Ibadan.

Research questions

The following research questions were answered in the study:

- i. What is the level of academic motivation among the undergraduates in the University of Ibadan, Ibadan, Oyo State, Nigeria?
- ii. What are the types of Learning Management Systems used by undergraduates in the University of Ibadan, Ibadan, Oyo State, Nigeria?
- iii. What is the purpose of the use of Learning Management System by undergraduates in the University of Ibadan, Ibadan, Oyo State, Nigeria?
- iv. What is the frequency of use of the Learning Management System by undergraduates in the University of Ibadan, Ibadan, Oyo State, Nigeria?
- v. What are the challenges to the use of Learning Management System by undergraduates in the University of Ibadan, Ibadan, Oyo State, Nigeria?

Hypothesis

1. There is no significant relationship between academic motivation and use of the Learning Management System by undergraduates in the University of Ibadan, Ibadan, Oyo State, Nigeria.

Literature review

The LMS has been a very important tool in curriculum design development and in organising factors that motivate student learning (Özdamli, 2007) by guiding institutions on how to create effective teaching and positive student learning practices (Santos and Boticario, 2007). According to Lopes (2014), some of the LMS used for creating and managing e-learning-based courses are Moodle, TelEduc, BlackBoard, WebCT, Toolbook, TopClass Server, web-based homework, among others. LMSs are known by various names, including course management system (CMS), learning content management system (LCMS), virtual learning environment (VLE) and virtual learning system (VLS) (Wright, Lopes, Montgomerie, Reju and Schmoller, 2014).

The use of Learning Management Systems by academic institutions, especially universities, seems to be gradually gaining prominence. According to Cigdem and Ozturk (2016), the Learning Management System (LMS) has become a major player in the area of distance education and is critical for academic institutions (Al-Busaidi, 2013). LMSs such as Blackboard, Moodle, WebCT and Desire2Learn are becoming increasingly important for university faculty in online managing and delivering course instruction (Capece and Campisi 2013; Dahlstrom, Brooks and Bichsel 2014). The use of Learning Management System will be discussed under the following indicators: types of LMS, purpose of use of LMS, frequency of use of LMS and challenges to the use of LMS.

LMS has been used for several years for the purpose of organising learning material, observing the progress of the user, whether it meets the particular goal which has been set and used as a platform to manage the content and information of the learning process. The advancement of technology allows the instructor to use LMS as a medium of interaction with students, especially in sharing notes, online discussion, etc. Basioudis et.al (2012) state that the growth of technology gives a betterment and contribution to the LMS in education.

Almoslamani (2018) identified three main uses of Learning Management Systems and they are: online discussion, audio discussion and virtual lecture. Online discussion is one of the tools in LMS that plays a massive role in students' interaction in online learning. Dawson, Macfadyen and Lockyer (2019) stated that 80% of students' engagement in online classes occurred on the discussion board. Alanazy (2013) also indicated that Saudi female students preferred to use online discussion because they felt confident, were comfortable and had reduced social anxiety. Audio discussion is also an essential tool in the Learning Management Systems, which equally aids students' interaction in online learning. The virtual lecture is a platform consisting of PowerPoint slides with live-recorded audio clips. Virtual lecture helps students review it anytime for retention of course content. Cramer, Collins, Snider and Fawcett (2006) surveyed 116 in-class and 29 online students on using virtual lectures. Results indicated that students believed the virtual lecture enhanced students' learning and improved their grades. In addition to the purpose of use of LMS, its frequency of use is another important indicator of LMS to be considered.

Dahlstrom, Brooks and Bichsel (2019) reported in a study that the vast majority (85%) of the lecturers used LMS to enhance their teaching activities. Most of the lecturers used LMS to share the course content and only a few of them used it for interactive

educational activities with the students. A total of 47% of the participants and 56% of the lecturers said that they rarely use the LMS. There are 31% of the participants and 37% of the lecturers who said that they use the LMS on a weekly basis. The majority of the lecturers (58%) used the LMS to send course-related information to the students and only 41% of them used it to encourage interaction with students outside of the classroom. Nonetheless, LMS is not without its challenges.

There are quite a number of challenges to the use of Learning Management Systems. Waheed and Seddon (2019) identified some key challenges to the use of LMS in academic institutions. They include a lack of models and theories to analyse the current learning environments and the usage of LMS, a lack of planning and strategies for the LMS implementation, a lack of integration of LMS with other supporting technologies, lack of user participation and training and lack of inclusiveness of academics in the implementation of LMS.

Academic motivation is an important factor in maintaining student satisfaction in the learning environment. This is in tandem with the view of Koyuncuoğlu (2021) that academic motivation is one of the most important sources of power that determines the direction, intensity and determination of student behaviour in the learning-teaching process. Lack of academic motivation can be a serious obstacle preventing learners from concentrating on instruction (Jaemu, Kim and Lee, 2008). According to Eccles and Roeser (2019), academic motivation is a concept that enable students to engage in learning with interest and enthusiasm.

Literature has also consistently revealed that academically motivated students tend to perceive school and learning as valuable, like to learn and enjoy learning-related activities (Larsen and Puck, 2020). Studies have equally identified a lack of academic motivation as a primary reason for students' underachievement (Scheel, Madabhushi and Backhaus, 2010). In a study by Koyuncuoğlu (2021) on the academic motivation of university students in Turkey, it was found that the academic motivation of the participants was at a high level. It was also found that female students have higher academic motivation than their male peers. These findings corroborate earlier findings of Asimaki and Vergidis (2013), Carvalho (2016), Duckworth et al. (2015) and Khaola and Mahao (2019).

Methodology

The descriptive survey research design of the correlational type was adopted for this study. The method relies on a questionnaire instrument, which is the most common method used in library and information science research. The descriptive survey research design of the correlational type was adopted because it is the most appropriate for this study. The population of this study comprises all 15,479 undergraduate students of the University of Ibadan. According to the University of Ibadan Pocket Statistics (2021), the population of undergraduate students running a full-time program is 15,479. This, therefore, forms the population of the study. The sample size of this study was 132 and a multi-stage simple sampling technique was adopted to achieve this. Five faculties were randomly selected from the sixteen faculties at the first stage. At the second stage, two departments were randomly selected, each from the five selected faculties. Afterwards, a sampling fraction of 5% was drawn from each of the ten departments selected to form the sample for the study. Hence, the sample size of 132 undergraduate students served as respondents for this study.

Table 1: Sample of the study

FACULTY	Sample size
Agriculture	22
Arts	21
Education	23
Science	35
Social Sciences	31
Total	132

The study used a validated questionnaire (Academic motivation scale with 10 items has an Alpha value of .746 ($\alpha = .75$), while Use of Learning Management Systems scale with 32 items has an Alpha value of .823 ($\alpha = .82$) as a tool for data collection. The questionnaire was titled: “Academic motivation and use of Learning Management Systems among undergraduates in the University of Ibadan” and it consisted of six (6) sections – A to F. Data were analysed using the Statistical Package for Social Sciences (SPSS). Statistical tools such as descriptive of, frequency counts, percentages, mean and standard deviation were used to answer the research questions 1–5. The Pearson’s Product Moment Correlation Coefficient (PPMCC) was used to test the study’s null hypothesis at a 0.05 level of significance. Tables and charts were drawn to present the results.

Results and discussion

Research Question 1: What is the level of academic motivation of the undergraduates in the University of Ibadan, Ibadan, Oyo State, Nigeria?

Table 2: Level of academic motivation of the undergraduates in the University of Ibadan, Ibadan, Oyo State, Nigeria

S/N	Intrinsic motivation	SA	A	D	SD	Mean	Std.Dev
1	I find the course I am studying to be inherently interesting and enjoyable.	28 21.2%	87 65.9%	12 9.1%	5 3.8%	3.05	.675
2	I am curious and eager to learn more about the course I am studying.	34 25.2%	75 56.8%	18 13.6%	5 3.8%	3.05	.740
3	I enjoy working on assignments and projects related to my academic field.	21 15.9%	78 59.1%	26 19.7%	7 5.3%	2.86	.743
4	I feel a sense of satisfaction and accomplishment when I complete an assignment or project.	48 36.4%	75 56.8%	4 3.0%	5 3.8%	3.26	.695
5	I take pride in my academic performance and the knowledge I gain.	39 30%	80 61.5%	6 4.6%	5 3.8%	3.18	.687
	Extrinsic motivation	SA	A	D	SD	Mean	Std.Dev
6	I work hard in my academics because I want to please my parents/guardians.	35 26.5%	63 47.7%	23 17.4%	11 8.3%	2.93	.879
7	I study hard in order to get a good job in the future.	41 31.1%	72 54.5%	13 9.8%	6 4.5%	3.12	.762
8	I strive for good grades in my academics because I want to receive recognition and praise from others.	9 6.8%	57 43.2%	50 37.9%	16 12.1%	2.45	.794
9	I am motivated to do well in my academics because it will lead to financial rewards.	29 22%	66 50%	31 23.5%	6 4.5%	2.89	.794
10	I put effort into my academics because it is required for me to reach my personal goals and aspirations.	48 36.4%	69 52.3%	9 6.8%	6 4.5%	3.21	.759
Weighted mean= 3.0 Criterion mean = 2.50							

Table 2 showed the level of academic motivation of the undergraduates in the University of Ibadan, Ibadan, Oyo state Nigeria. The result revealed a weighted aggregated mean of 3.0 which is higher than the criterion mean of 2.50. This implies that there is a positively high level of academic motivation among undergraduates in the University of Ibadan. The table further revealed that all items under this construct had their mean scores to be above the criterion mean score. This further

confirms that there is a high level of academic motivation among undergraduates at the University of Ibadan.

Research Question 2: What are the types of Learning Management Systems used by undergraduates in the University of Ibadan, Ibadan, Oyo State, Nigeria?

Table 3: Types of Learning Management Systems used by undergraduates in the University of Ibadan

S/N	Types of Learning Management Systems used I use:	Yes	No
1	University of Ibadan LMS	113 (85.6%)	19 (14.4%)
2	Moodle	87 (65.9%)	45 (34.1%)
3	Edmodo	54 (40.9%)	78 (59.1%)
4	Schoology	61 (46.2%)	71 (53.8%)
5	Google Classroom	101 (76.5%)	31 (23.5%)
6	Blackboard Learn	43 (32.6%)	89 (67.4%)
7	MOOC Platforms (eg. Coursera, Udemy, Udacity etc)	62 (47.0%)	70 (53.0%)
8	Canvas LMS	45 (34.1%)	87 (65.9%)

Table 3 shows the types of Learning Management Systems used by undergraduates at the University of Ibadan. The table indicated that the predominant types of Learning Management System used by undergraduates in the University of Ibadan include: University of Ibadan LMS 113(85.6%), Google Classroom 101(76.5%), Moodle 87(65.9%), MOOC Platforms (eg. Coursera, Udemy, Udacity, etc.) 62(47.0%) and Schoology 61(46.2%). The least types used are: Edmodo 54(40.9%), Canvas LMS 45(34.1%) and Blackboard Learn 43(32.6%).

Research Question 3: What is the purpose of the use of Learning Management System by undergraduates in the University of Ibadan, Ibadan, Oyo State, Nigeria?

Table 4: Purpose of use of Learning Management System by undergraduates in the University of Ibadan

S/N	Purpose of Use of Learning Management Systems	SA	A	D	SD	Mean	Std.Dev
1	I use a Learning Management System to access course materials	14 10.6%	102 77.3%	11 8.3%	5 3.8%	2.95	.584
2	I use a Learning Management System for personalised learning	8 6.1%	94 71.2%	26 19.7%	4 3.0%	2.80	.585

3	I use a Learning Management System to participate in online discussions.	13 9.8%	89 67.4%	24 18.2%	6 4.5%	2.83	.660
4	I use a Learning Management System to submit assignments.	14 10.7	87 66.4%	25 19.1%	5 3.8%	2.84	.654
5	I use a Learning Management System to communicate and collaborate with classmates.	11 8.3%	80 60.6%	39 29.5%	2 1.5%	2.76	.619
6	I use a Learning Management System to receive notifications and updates on class activities.	11 8.3%	86 65.2%	30 22.7%	5 3.8%	2.78	.646
7	I use a Learning Management System to access my grades.	11 8.3%	85 64.4%	33 25.0%	3 2.3%	2.79	.618
8	I use a Learning Management System to communicate with instructors.	9 6.9%	89 67.9%	28 21.4%	5 3.8%	2.78	.624
Weighted mean= 2.82 Criterion mean = 2.50							

Table 4 shows the purpose of use of the Learning Management System by undergraduates at the University of Ibadan. The table revealed that the predominant purpose of use of Learning Management System by undergraduates in the University of Ibadan includes: to access course materials (2.95), to submit assignments (2.84), to participate in online discussions (2.83) and for personalised learning (2.80). The least purpose of use of Learning Management System by undergraduates in the University of Ibadan, according to the table, is to communicate and collaborate with classmates (2.76).

Research Question 4: What is the frequency of use of the Learning Management System by undergraduates in the University of Ibadan, Ibadan, Oyo State Nigeria?

Table 5: Frequency of use of Learning Management System by undergraduates in the University of Ibadan

S/N	Frequency of Use of Learning Management Systems	Very Often	Often	Occasionally	Never	Mean	Std.Dev
1	University of Ibadan LMS	8 6.1%	39 29.5%	77 58.3%	8 6.1%	2.36	.690
2	Moodle	7 5.3%	27 20.5%	68 51.5%	30 22.7%	2.08	.801
3	Edmodo	2 1.5%	13 9.8%	54 40.9%	63 47.7%	1.65	.720
4	Schoology	4	20	47	61	1.75	.823

		3.0%	15.2%	35.6%	46.2%		
5	Google Classroom	15 11.4%	46 34.1%	57 43.2%	14 10.6%	2.47	.833
6	Blackboard Learn	10 7.6%	27 20.5%	21 15.9%	74 56.1%	1.80	1.017
7	MOOC Platforms (eg, Coursera, Udemy, Udacity, etc)	6 4.5%	27 20.5%	46 34.8%	53 40.2%	1.89	.885
8	Canvas LMS	4 3.0%	23 17.4%	33 25.0%	72 54.5%	1.69	.866
Weighted mean= 1.96 Criterion mean = 2.50							

Table 5 shows the frequency of use of the Learning Management System by undergraduates at the University of Ibadan. The table revealed a weighted aggregated mean of 1.96, which is lower than the criterion mean of 2.50. This implies that undergraduates at the University of Ibadan seldom use Learning Management Systems. In other words, they are not well exposed to the use of Learning Management Systems. The result further revealed that all of the items had mean scores lower than the criterion mean. This further confirms that the students are not well exposed to the use of Learning Management Systems.

Research Question 5: What are the challenges to the use of Learning Management Systems by undergraduates in the University of Ibadan, Ibadan, Oyo State, Nigeria?

Table 6: Challenges to the use of Learning Management System by undergraduates in the University of Ibadan

S/N	Challenges to the Use of Learning Management Systems	SA	A	D	SD	Mean	Std.Dev
1	I lack the technical knowledge to effectively use the LMS.	2 1.5%	22 16.7%	87 65.9%	21 15.9%	2.04	.623
2	I experience difficulty navigating the interface of the LMS.	2 1.5%	47 35.9%	67 51.1%	15 11.5%	2.28	.680
3	There is no adequate training on how to use the LMS.	2 1.5%	80 60.6%	47 35.6%	3 2.3%	2.61	.562
4	The slow performance of the LMS causes frustration.	10 7.6%	92 69.7%	28 21.2%	2 1.5%	2.83	.569
5	There are insufficient resources and materials for learning on the LMS.	9 6.8%	77 58.3%	43 32.6%	3 2.3%	2.70	.630
6	I experience difficulty in accessing the LMS from multiple devices.	6 4.5%	75 56.8%	47 35.6%	4 3.0%	2.63	.623

7	There is a lack of proper organisation of course content and resources on the LMS	5 3.8%	67 50.8%	57 43.2%	3 2.3%	2.56	.609
8	I experience difficulty in keeping track of assignments and grades on the LMS	4 3.0%	59 44.7%	63 47.7%	6 4.5%	2.46	.635
Weighted mean= 2.51 Criterion mean = 2.50							

Table 6 shows the challenges to the use of the Learning Management System by undergraduates at the University of Ibadan. The table revealed a weighted aggregated mean of 2.51, which is slightly higher than the criterion mean of 2.50, implying that the students are really faced with the identified challenges on the use of Learning Management Systems. The result further revealed that the predominant challenges to the use of Learning Management Systems by students are: the slow performance of the LMS causes frustration (2.83), insufficient resources and materials for learning on the LMS (2.70), difficulty in accessing LMS from multiple devices (2.63), there is no adequate training on how to use the LMS (2.61) and lack of proper organisation of course content and resources on the LMS (2.56). The least challenges faced are: lack of technical knowledge to effectively use the LMS (2.04), difficulty navigating the interface of the LMS (2.28) and difficulty in keeping track of assignments and grades on the LMS (2.46).

Hypothesis: There is no significant relationship between academic motivation and use of Learning Management System by undergraduates in the University of Ibadan, Ibadan, Oyo State, Nigeria

Table 4.7: Relationship between academic motivation and use of Learning Management System by undergraduates in the University of Ibadan

Variables	N	Mean	St.Dev	Df	r	P	Sig
Academic Motivation	132	3.00	.498	131	.210	.016	S
Use of LMS	132	1.96	.519				

*. Correlation is significant at the 0.05 level (2-tailed).

Table 7 shows the relationship between academic motivation and the use of the Learning Management System by undergraduates at the University of Ibadan. The result showed that there

is a significant relationship between academic motivation and use of the Learning Management System by undergraduates in the University of Ibadan ($r = .210$; $P < 0.05$). This implies that there is a positive and significant linear relationship between academic motivation and the use of the Learning Management System by undergraduates in the University of Ibadan.

Discussion of Findings

Findings from the study revealed that there is a high level of academic motivation among undergraduates in the University of Ibadan (Mean=3.0). The findings of this study are in tandem with those of Koyuncuoğlu (2021), who carried out a study on academic motivation of university students in Turkey and found that the academic motivation of the participants was at a high level. This is also similar to the findings of Larsen and Puck (2020) on the same study. According to Larsen and Puck (2020), academically motivated students tend to perceive school and learning as valuable, like to learn and enjoy learning-related activities.

Findings from the study revealed that the predominant types of Learning Management System used by undergraduates in the University of Ibadan include: University of Ibadan LMS, Google Classroom, Moodle, MOOC Platforms (e.g. Coursera, Udemy, Udacity etc) and Schoology. The least types used are: Edmodo, Canvas LMS and Blackboard Learn. This is similar to the findings of Lopes (2014), who identified some of the LMS used for creating and managing e-learning-based courses to include Moodle, TelEduc, BlackBoard, WebCT, Toolbook, TopClass Server, web-based homework, among others. The study's findings are also in tandem with those of Dahlstrom, Brooks and Bichsel (2014), who noted that LMSs such as Blackboard, Moodle, WebCT and Desire2Learn are becoming increasingly important for university faculty and students in online managing and delivering course instruction.

Findings from the study showed that the predominant purpose of use of Learning Management System by undergraduates in the University of Ibadan includes: to access course materials, to submit assignments, to participate in online discussions and for personalised learning. The least purpose of use of Learning Management System by undergraduates in the University of Ibadan, according to the study, is to communicate and collaborate with classmates. This is similar to the view of Basioudis et.al (2012) averred that LMS is used for the purpose of organising learning material, observing the progress of the user, whether it meets the particular goal which has been set and as a platform to manage the content and information of the learning process. The

findings of this study also align with that of Almoslamani (2018) who identified three main use of Learning Management Systems, which are: online discussion, audio discussion and virtual lecture.

Findings from the study revealed that undergraduates in the University of Ibadan seldom use Learning Management Systems. In other words, they are not well exposed to the use of Learning Management Systems. The study further highlighted that all of the items measured had mean scores lower than the criterion mean. This further confirms that the students are not well exposed to the use of Learning Management Systems. The study's findings corroborate that of Dahlstrom, Brooks and Bichsel (2019), who reported in a study that a total of 47% of the students and 56% of the lecturers said that they rarely use the LMS. The majority of the lecturers (58%) used the LMS to send course-related information to the students and only 41% of them used it to encourage interaction with students outside of the classroom.

Findings from the study revealed a weighted aggregated mean of 2.51, which is slightly higher than the criterion mean of 2.50, implying that the students are really faced with the identified challenges in the use of Learning Management Systems. Findings from the study further revealed that the predominant challenges to the use of Learning Management Systems by the students are: the slow performance of the LMS causes frustration, insufficient resources and materials for learning on the LMS, difficulty in accessing LMS from multiple devices, there is no adequate training on how to use the LMS and lack of proper organisation of course content and resources on the LMS. The least challenges faced are: lack of technical knowledge to effectively use the LMS, difficulty navigating the interface of the LMS and difficulty in keeping track of assignments and grades on the LMS. The findings of this study is similar to that of Waheed and Seddon (2019), who identified some key challenges to the use of LMS in academic institutions such as: lack of models and theories to analyse the current learning environments and the usage of LMS, lack of planning and strategies for the LMS implementation, lack of integration of LMS with other supporting technologies, lack of user participation and training and lack of inclusiveness of academics in the implementation of LMS.

The result of the correlational analysis showed that there is a significant relationship between academic motivation and use of the Learning Management System by undergraduates in the University of Ibadan ($r = .210$; $P < 0.05$). This implies that there is a positive and significant linear relationship between academic motivation and use of the Learning Management System by

undergraduates in the University of Ibadan. The findings of this study are similar to those of Ayinla and Hameed (2017), who examined the motivation of undergraduates and the use of learning management systems (LMS) for learning Chemistry concepts. The findings revealed that there is a significant relationship between the motivation of undergraduates and the use of LMS for learning Chemistry concepts ($p < 0.05$). Also, the findings from this study corroborate that of Raman et al. (2022), who conducted a study on the influence of intrinsic motivation on behavioural intention and actual use of technology in Moodle platforms. Findings of this study revealed that Intrinsic Motivation influenced behavioural intention to use Moodle ($p < 0.05$). Similarly, in a study by Mustapha et al., (2023) on students' motivation and effective use of self-regulated learning on Learning Management System Moodle environment in higher learning institution in Nigeria, findings from the study revealed a significant correlation between motivation and effective use of self-regulated learning on Learning Management System Moodle environment ($p < 0.05$).

However, the findings of this study is not in tandem with that of Berestova et al., (2022), who examine the very essence of student motivation in the context of e-learning and identifies the factors that influence it. In general, the results of the study indicated the absence of statistically significant variations in motivation levels across experimental (studying online) and control (studying traditionally) group participants ($t = 0.721, p > 0.05$). The significance of this research stems from the fact that it provides an idea of how to increase student engagement in e-learning and limit the effect of determinants reducing student motivation.

Conclusion

This study has been successful in establishing a significant relationship between academic motivation and the use of Learning Management Systems (LMS) among undergraduates at the University of Ibadan. The findings indicated that there was general high academic motivation among the students and although various LMS platforms such as the University of Ibadan LMS, Google Classroom and Moodle were being used, the frequency level was very low. The majority of students used LMS platforms mainly to access course content, submit assignments and engage in online forums. Nevertheless, slow system speed, a lack of proper training, lack of learning content and accessibility issues from various devices prevented the effective use of LMS. The

findings point to the disparity between the desire of students to learn and the actual use of LMS tools by students, indicating the necessity for focused interventions.

Academic motivation is a critical ingredient in students' utilization of LMS platforms and increasing LMS use must be facilitated by the institution. Universities should not only invest in increasing LMS infrastructure but also develop strategies for mapping students' motivational levels to greater and meaningful use of LMS tools. Practical training, improved system performance and providing an enabling environment for e-learning can go a long way to bridge the gap. By addressing these kinds of issues, the University of Ibadan and other universities can enhance students' learning experiences and academic performances through technology-supported education.

Recommendations

There is a positive and significant linear relationship between academic motivation and use of Learning Management System by undergraduates in the University of Ibadan. Consequent upon this, the following recommendations are based on the conclusion of the study:

1. The university should provide adequate and reliable internet access and technical support for students and instructors who use LMS for teaching and learning purposes.
2. The university should design and implement training programs and workshops for both students and instructors on how to effectively use LMS for various academic activities, such as accessing course materials, submitting assignments, participating in discussions and receiving feedback.
3. The university should encourage and reward instructors who adopt innovative and engaging pedagogical strategies that utilise LMS to foster student motivation, interest and participation in their courses.
4. The university should monitor and evaluate the quality and effectiveness of LMS usage by both students and instructors and provide feedback and suggestions for improvement.
5. The university should foster a positive and supportive learning environment that promotes academic motivation and LMS usage among students, such as by creating online communities of practice, facilitating peer collaboration and mentoring and recognising student achievements.

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